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with each other and integrating these wires with a resin is used.

(57) Abstract:

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PROBLEM TO BE SOLVED: To make it possible to reduce an outside diameter and to enhance the degree of freedom in a bending direction by forming a cylindrical body by molding a belt-like material to a cylindrical shape and constituting at least part of the cylindrical body from any among fiber reinforced plastic, metallic material and parallel continuous metallic wire reinforced plastic.

SOLUTION: The cylindrical body 2 is molded to the cylindrical shape by superposing and adhering both edges of the belt-like material along a longitudinal direction in a joint part 5. The cylindrical body 2 has a three-layered structure consisting, successively from its inner peripheral side, of a water absorption layer, tension layer and laminated layer. The tension layer is required to have high tensile strength (for example, 100 to 2000 MPa) bearing the tensile strength of the optical fiber 10. When fibers are used for the fiber reinforced plastic, glass fibers, carbon fibers, aramid fibers, etc., are exemplified. Iron, aluminum, etc., or their alloys are used as the metallic materials. The parallel continuous metallic wire reinforced plastic formed by lining up plural long-sized metallic wires in parallel

